**New Jersey Nonpoint Source Annual Report**
**2001-2003**

## Introduction

The New Jersey Department of Environmental Protection's (NJDEP) Division of Watershed Management (DWM) administers New Jersey's Nonpoint Source (NPS) Program. In December 2000, the Department issued, *New Jersey's Nonpoint Source and Stormwater Management Program Plan,* which served as an update to the 1989 original Nonpoint Source Plan for New Jersey. The updated plan provided a detailed description of how the NJDEP, in concert with its partners and informed public would implement NPS and stormwater management control strategies over the next 15 years. It was prepared in response to guidance from the federal Environmental Protection Agency (EPA) for state nonpoint source programs (Section 319 of the federal Clean Water Act) and the United States Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) for coastal nonpoint source programs (Coastal Zone Management Act, section 6217).

This Annual Report spans the years 2001-2003 and provides an update to both EPA and the public on the status of New Jersey's NPS program. The NJDEP must manage both the quantity and quality of the State's water resources, including ground water, to sustain the water quality and water supply needs of the State's residents and its ecology. The NPS program serves a primary vehicle for the realization of this objective. The overarching goals of the DWM are comprehensive resource management on a watershed basis to ensure "clean and plentiful water" for the residents of New Jersey. This is accomplished through the restoration of the integrity of New Jersey's water resources by preventing, abating, and controlling pollution to achieve the goal of fishable and swimmable waters statewide.

## The Problem

The failure to aggressively manage the state's water resources in a comprehensive fashion has increased the susceptibility of both the state's residents and ecology to the risk of more frequent and severe water shortages. Development in the state has not only increased water demand statewide, but has also lead to increasing NPS pollution associated with runoff and paved over ground water recharge areas. Resultant effects are observed as more runoff during storm events and less base flow when the rain stops. Our streams are becoming more prone to flash flooding while minimum passing flows during dry periods have been steadily declining due to reduced recharge and increased water withdrawals. If this trend continues many of the state's aquatic communities are at significant risk. This trend is also having an adverse effect on the quality of the state's surface waters due to increasing pollutant loads from a myriad of nonpoint sources associated with stormwater runoff and insufficient flows to dilute point source discharges during dry periods. The challenge ahead is for New Jersey to manage its water resources in a holistic fashion and to reverse the current trend.

## The Solution: Water Quality Initiatives

Since the year 2000, the NJDEP had steadily evolved its present day statewide watershed management program direction from consensus building and broad based planning to an environmental based management system gradually focusing its efforts on achieving environmental results. Most recently, NJDEP has further refined this philosophy to a more

prescriptive standards-based management system, wherein environmental progress and results are both tangible and measurable.

The advancement of the NPS Program to achieve measurable water quality improvement and restoration is integrally tied into the following programmatic responsibilities of the DWM:

- Proposed Stormwater Management rules (N.J.A.C. 7:8) which upon adoption (Fall 2003) will require greater control of NPS pollution, ground water recharge and strengthen riparian corridor protection.
- Adoption of the upgrade of 15 waterways to Category One status due to their water supply and ecological significance.
- Executed Memorandum of Agreement with EPA Region 2 that set forth an aggressive schedule for the establishment of 159 TMLs by July 2003.
- Updating the 1996, New Jersey Statewide Water Supply Master Plan to focus on substantial improvements to the State's water supply management strategy, including wastewater reuse.

The implementation of the NPS Program will be more concentrated and focused in alignment with the most recent initiative to streamline the watershed management planning process. New emphasis is being placed on segment specific watershed action plans. To that end, the DWM will work with each of the state's twenty watershed management areas to pick a segment with a developed TMDL, identify the specific pollutant sources, recommend specific best management practices and control for those sources, develop a plan for the implementation of best management practices and a monitoring plan for documentation of effectiveness.

**Water Quality Overview in New Jersey**

In accordance with Section 305(b) of the federal Clean Water Act, the state of New Jersey is required to biennially prepare and submit to EPA a report addressing to the overall water quality of the state's waters. This report is commonly referred to as the 305(b) Report of the Water Quality Inventory Report. The state is also required to biennially prepare and submit to EPA a report that identifies waters that do not meet or are not expected to meet surface water quality standards after the implementation of technology-based effluent limitations or other required controls. This report is commonly referred to as the 303(d) list. In November 2001, EPA issued guidance that encouraged states to integrate the 305(b) report and the 303(d) list into one report. Following EPA's guidance, the NJDEP choose to develop an Integrated Report for New Jersey. Some of the highlights from The 2002 Integrated Water Quality Monitoring and Assessment Report indicated that out of New Jersey's 2,308 assessed non-tidal river miles:

- 1,913 miles or 83% did not meet SWQS
- 35% exceedances of fecal coliform
- 45% of stations exceed Total Phosphorus
- 78% did not meet recreational use

The 2002 Integrated Water Quality Monitoring and Assessment Report indicated that out of New Jersey's 179 Assessed Tidal River Miles: all exceed SWQS for metals and 45% did not meet recreational use.

**Whats New – Smart Growth Practices**

The NJDEP's paramount priority is the implementation of Governor McGreevey's ambitious smart growth agenda to combat sprawl and overdevelopment, preserve open space and expand public access to parks and recreation resources. The NJDEP has fulfilled several ongoing initiatives outlined in the NPS Strategy and has embarked on several new schemes to improve water quality in the state and to promote smart growth initiatives. As per the federal Phase II Stormwater Rules, New Jersey has proposed Municipal Stormwater Permitting Rules (N.J.A.C. 7:8), which will address sources of NPS impairment by requiring municipalities to develop control plans for stormwater runoff from existing and new development. In order to offset some of the cost to municipalities to implement the requirements of the program, New Jersey secured approval from EPA to use its approximately 2.2 million dollars in FY 03 base 319(h) funds to pass through directly to New Jersey's municipalities. New Jersey is also seeking a waiver to use its approximately 1 million in incremental 319(h) funds to further assist municipalities.

The cornerstone of New Jersey's proactive approach to safeguard drinking water supplies has been realized through the proposed Stormwater Permit regulations coupled with the proposal of new Stormwater Management Rules. The state's Stormwater Management rules have not been updated since their adoption in 1983, the new rule will require maintaining 100 percent of the average annual recharge. The rules also stress water quality control through the implementation of best management practices for new development to reduce stormwater runoff by 80% and require a riparian buffer width of 300 feet from top of bank for both sides of a Category One waterbody. New Jersey is comfortable in its supposition that a 300-foot width is imperative to protecting overall stream quality (see NJR for rule and supporting documentation) but may be forced to reduce this number in its final adoption of the rule later this Fall.

To complement the Stormwater Management Rules, in April 2003 New Jersey designated nine reservoirs and six ecologically sensitive river and stream segments as Category One through rule adoption. The nine reservoirs provide drinking water to approximately 3.5 million New Jersey residents while the more than 200 miles of steams and waterways serve as critical habitat for many of New Jersey's threatened and endangered species. These upgrades include:

**Reservoirs**

Round Valley Reservoir - Clinton Township, Hunterdon County
Doughty Reservoir - Egg Harbor, Galloway, Absecon, Atlantic County
Charlottesburg Reservoir - Rockaway, Morris County
Boonton Reservoir - Boonton Township, Morris County
Swimming River Reservoir - Colts Neck, Red Bank, Monmouth County
Glendola Reservoir - Wall Monmouth County
Manasquan Reservoir - Howell, Monmouth County
Wanaque Reservoir - Ringwood, Wanaque, Passaic County

**Streams**

South Branch Rockaway Creek - Clinton, Lebanon, Readington, Hunterdon County
Sidney Brook - Clinton, Union, Franklin, Hunterdon County
Flat Brook - Walpack, Sussex County
Pequest River - Liberty, Mansfield, Warren County

Assicunk Creek – Springfield, Mansfield, Burlington County
Beaver Brook – Clinton, Hunterdon County

An additional 7 waterbodies based on their production of trout and habitat for endangered species has also been proposed for Category One protection. Watershed Management Area stakeholders have been encouraged to make recommendations for future candidates to the NJDEP.

**BIG Map**

The Blueprint for Intelligent Growth (BIG) Map is a new map-based initiative designed to achieve smart growth and to improve the quality of life for all New Jersey residents. A major goal of the BIG Map is to make the state's environmental regulations transparent to developers and municipalities so they will fully understand their obligations and legal limitations prior to proposing new development projects. It will show where the NJDEP, through streamlined regulatory approaches, will encourage growth, new development and redevelopment, and where it will discourage inappropriate growth to protect the state's waters and natural resources.

NJDEP created the BIG Map by overlaying various sets of data available to the state that detailed existing environmental and planning information. In addition to the state's critical water resources, the map incorporates data on significant habitats for threatened and endangered species, existing infrastructure such as roads and sewers and land that has already been preserved. After the data was consolidated into one visual representation of the state's land mass areas were color-coded to reflect heir suitability for development (see draft map enclosed). Land viewed as suitable was color-coded green, yellow was assigned to areas where NJDEP felt development proposals should be cautiously reviewed and red was used for areas that were deemed deserving of strong protection from development.

The NJDEP is currently undergoing a public review process through both an informal and formal comment periods. Following approval from the Governor's Office, the BIG Map will be formally proposed for adoption. At the same time the NJDEP will propose revisions to existing regulations to align them with smart growth categories designated in the map, which will also undergo a public comment process. The BIG Map has the potential to positively reshape development trends in New Jersey resulting in nonpoint source reductions in environmentally sensitive areas.

**Artificial Reef Program**

New Jersey also supports a unique artificial reef program consisting of ships; barges cast concrete, dredged rock and structural steel. In the Fall 2003, 250 obsolete New York transit subway cars will be deployed on five offshore artificial reefs. The cleaned cars provide habitat for 200 species of fish and invertebrates as the artificial reefs create a biomass and form important nurseries for juvenile fish. New Jersey is establishing itself as a national leader in artificial reef policy by developing comprehensive materials standards and fisheries goals. This will provide the public with assurance that our reefs will not be ocean dumping grounds. An eight-year study will ascertain the durability of the cars and their effect on marine life.

**Statewide Water Supply Master Plan**

New Jersey prepared its first Statewide Water Supply Plan in 1981, updated it in 1996 and is working on the next iteration New Jersey Statewide Water Supply Plan. It will provide a blue print for how water supplies are both managed and developed during the next fifty years. Specific challenges include: meeting the water demands for a growing population since, it is anticipated that the state's population is likely to grow to 10 million people by the end of the 50-year planning horizon; most conventional water supplies such as reservoirs have already been built; and declining ground water levels in southern New Jersey, including saltwater intrusion. The importance of a holistic approach by integrating water supply planning with wastewater management planning on a watershed management is critical to success. To accomplish the NJDEP's environmental objectives to protect water supplies for both human consumption and use as well as for aquatic resources, several ongoing initiatives will soon come to fruition. These include the establishment of ecological flow goals, development of water budgets, targeted land acquisition as well as aggressive implementation of water conservation measures. The NJDEP expects to finalize the next New Jersey Statewide Water Supply Plan in 2005.

**Conservation Reserve Enhancement Program**

The Conservation Reserve Enhancement Program (CREP) is part of USDA's conservation reserve program. The program allows agricultural landowners to voluntarily implement conservation practices on agricultural lands, and offers financial incentives for participation. The New Jersey CREP seeks the enrollment of 30,000 acres of agricultural lands into conservation practices to improve the quality of runoff from agricultural land. Of the 30,000 acres targeted for enrollment, 4,000 acres are targeted for permanent preservation. The enrollment of farmland into CREP in New Jersey is expected to make significant contribution toward reaching clean water goals and milestones.

The project proposes a total cost of $100 million dollars over the 25-year life of the program. New Jersey will provide $23 million and is requesting a commitment of $77 million from USDA-Commodity Credit Corporation. The CREP requires a state match of a minimum of 20% of the project costs. The CREP will have a ten-year enrollment period, with a maximum of a 15-year contract period resulting in a 25-year program. The Garden State Preservation Trust Dollars from Green Acres and the Farmland Preservation Program will fund the permanent contract payments. Four practices to improve water quality are the focus of the New Jersey's CREP: riparian forest buffers, contour grass strips, filter strips, and grass waterways.

**NPS Program Update**

While major water quality initiatives are in progress, the DWM has also improved consistency among staff actions through the distribution of work based on functionality rather than geographic focus. The newly created Bureau of Evaluation and Management within the DWM is responsible for administering the NPS program. The primary mission of the Bureau is to document the efficacy of the DWM's various water resource programs and ensuring that funding priorities and subsequent award of funds are extended consistent with the goals of the DWM. The Bureau will act as the single point of entry for all grant applications, initiate a comprehensive grant tracking system and assume the lead role in prioritization of projects for funding.

In accordance with EPA directives based on the Office of Management and Budget Program assessment rating of the federal 319 (h) NPS program, the DWM will begin to implement and place a new emphasis on measurable program results for all pass-through grant funds. Results based performance information would allow the DWM to measure the effectiveness of its program and grant funds. Outcomes rather than outputs will be evaluated. Emphasis will be placed on evaluation of the achievement of project goals and objectives rather than counting the number of services delivered by the project.

The subsequent section provided an update to the components and requirements of the NPS program as first discussed in the 1989 NPS statewide plan and subsequently revised in the December 2000 strategy, entitled *New Jersey's Nonpoint Source and Stormwater Management Program Plan.*

**Total Maximum Daily Loads (TMDLs)**

On September 16, 2002, the NJDEP and EPA Region 2 signed a memorandum of agreement (MOA), which superseded the schedule for implementing TMDLs that was laid forth in the May 1999 MOA. The current MOA outlined an aggressive schedule for the establishment of 159 TMDLs by July 2003 based on New Jersey's 2002 Integrated List. New Jersey has surpassed this target by already establishing 166 TMDLs for fecal coliform and 35 phosphorus lake TMDLs as of April 2003. New Jersey is anticipating Region 2 approval. A separate TMDL document was prepared for each of the five water regions for each parameter. The selected segments from the Category 5 list were based on those segments that were impaired due to nonpoint source contributions to phosphorus and fecal coliform. Each document contains a TMDL implementation plan that was crafted with assistance from the watershed management area stakeholders to identify both the suspected sources of the impairment as well as recommended long term and short-term management measures to address the impairment. Hence, the TMDLs form the basis for much of the NJDEP's updated watershed management strategy by providing a vehicle to engage stakeholders in identification and implementation activities.

**319 (h) NPS Grant Program Update**

New Jersey has been passing through 319 (h) grant funds to eligible entities throughout the state since 1995. While early projects focused on streambank restorations in denuded riparian corridors, most recent projects as per EPA guidance focus on addressing and realizing TMDL Implementation plans. In its SFY 2002 and 2003 Guidance for submitting a nonpoint source proposal, New Jersey identified strategic funding priorities and executed contacts with 20 different agencies. Funding priorities were identified as:

- Reduction of NPS Pollution in List 5 impaired waters and/or implementation of an established total maximum daily load;
- Restoration, maintenance or enhancement of Category 1 Waters or Ambient Biological Monitoring Station;
- Implementation of stormwater management or water quality measures identified in previous assessment projects;
- Development of Regional Stormwater Management Plans

Projects selected for funding over the past three years are enclosed at the end of this Report.

**SFY 04 319(h) Funding**
Although New Jersey is seeking a waiver to utilize the majority of its 319(h) NPS funds to implement Phase II Stormwater Permit Requirements, the DWM has issued guidance requesting proposals that address the above priorities. To better document the results of the selection process and to emphasize the move towards measurable environmental improvement, the DWM developed Proposal Evaluation Criteria. Proposals solicited in response to the RfP will be "scored"; thus introducing a level of consistency in funding selection among competing proposals.

**Watershed Restoration Action Strategy (WRAS) Update**
In 1998, a new federal Clean Water Action Plan made additional Clean Water Act, Section 319 funds available to states to address impairments caused by NPS. In the initial Unified Watershed Assessment dated August 1998, NJDEP prioritized 7 WMAs for funding to target additional section 319 (h) funds. In May 2001, the NJDEP submitted an update to the UWA to EPA Region 2 that prioritized all 20 WMAs as significantly impaired or in need of restoration. The reasons and justification for prioritizing all 20 WMAs was based on:

1) Information demonstrating that on a HUC-8 basis, all of New Jersey's WMAs contain segments that are 15-25% impaired and in need of restoration;
2) Initiation of a statewide watershed management process that was underway in all 20 WMAs that could implement effective restoration efforts;
3) Availability of state funds to each WMA to address water quality objectives.

On November 1, 2001 EPA Region 2 responded affirmatively that all 20 WMAs would be eligible to receive Section 319 incremental funding upon submittal of the remaining Watershed Restoration Action Strategies for the 13 WMAs previously not selected for prioritization. Each WRAS identified pollution sources through problem identification and prioritization of activities needed to address NPS impairment and a recommended course of action through an Action Now Agenda.

Although NJDEP has departed from a planning module to implement ambitious water quality goals established in the NJDEP Strategic Plan and Joint Performance Partnership Agreement, water resource objectives are now being addressed through a standards based management system as described earlier in this Report. Thus rather than becoming obsolete planning tools the intent and purpose of the WRAS has been made current by being embodied in the mission of the Bureau of Evaluation and Management to document and achieve use attainment for all waters of the state. The essential stakeholder involvement piece of the DWM's watershed management planning process is still a key component to the updated watershed process.

**Grants Reporting Tracking System (GRTS) Update**
The NJDEP has made significant strides in updating the Grants Reporting Tracking System required by EPA as part of the 319(h) grant administration process. DWM staff have attended several recent regional training sessions and have been trained to use the STEPL Spreadsheet Tool for Estimating Pollutant Load and the Region 5 Load Estimation Tool. Both tools allow the user to predict and determine load reduction estimates for nutrients and sediment. These simple models work well for such specific 319(h) funded projects as streambank restorations from which the data is entered into the calculation to determine a quantified percent reduction. Staff

have gone out into the field to verify the functionality of streambank restoration projects and detention basin and other urban retrofit projects. Each project will be located using global positioning systems technology. The data will be transferred to GIS coverages and maps will be created to aid in visualizing and defining the set of conditions needed to obtain and maintain designated and existing uses for waterbody segments.

**6217 Program Update**

New Jersey's 6217 NPS pollution control strategy was initially compiled and submitted to the National Oceanic and Atmospheric Administration and the U. S. Environmental Protection Agency (federal agencies) in 1995. Subsequently the proposal was conditionally approved by those agencies. The NJDEP made some progress in the past several years to implement the strategy, including EPA's approval of the NJDEP's watershed management program as a means to identify priority NPS impairments, and the approval of a program to address NPS pollution from marina (boat repair) related facilities. However, the NJDEP's progress in meeting those conditions has been inconsistent historically, yet significant progress has been made over the past year. The following is a report out on progress made and a discussion on outstanding issues.

The NJDEP's strategies for addressing restoration of modified stream channels (channelization and impoundments) received approval from EPA and NOAA on June 6, 2002. The state's strategy for improving ambient monitoring was also approved on June 6, 2002. This leaves the following conditions as unresolved:

On April 13, 2001 the federal agencies forwarded a letter to the NJDEP seeking proof of regulatory authority over agricultural operations in order to comply with this condition. Conference calls were conducted between the NJDEP and the federal agencies on June 11, and June 14, 2001 to discuss a strategy for satisfying this condition. On November 11, 2002 the NJDEP forwarded a legal opinion clearly stating that the NJDEP could use the authority of the Water Pollution Control Act and the Water Quality Management Planning Act to cure water pollution problems associated with agricultural operations. The legal opinion was rejected by the federal agencies on January 21, 2003 because it did not provide proactive authority to prevent water pollution from agricultural operations before they occur. The federal agency response was forwarded to the Attorney General's Office on February 11, 2003 for additional consideration. The difficulty in meeting the proactive test revolves around the many exemptions that agriculture has been afforded under existing NJDEP authority (e.g. the Freshwater Wetlands Protection Act) although many of these same exemptions also occur in federal legislation (e.g. section 404 of the Clean Water Act).

The federal agencies conditioned the 6217 approval on amendments to our rules governing on-site sewage disposal systems providing for reductions in nitrogen loadings and a method for determining when systems are failing. The NJDEP put a comprehensive package together describing the authorities and responsibilities at the State, county and local levels of government with regard to on-site sewage disposal systems. This package was forwarded to the federal agencies on October 15, 2002. To date, the NJDEP has not received a response. It should be noted that in terms of maintenance assurance of these systems, the federal agencies might be looking for a program that lies beyond our current requirements. (We may need to amend our

septic system regulations, County Environmental Health Act or Water Quality Management Planning Rules to require submission of receipts as proof of system maintenance)

The federal agencies included three conditions intended to be satisfied by the recent stormwater rule proposals (N.J.A.C. 7:8 and N.J.A.C. 7:14A). These conditions required incorporation of the 2-year design storm into the NJDEP's stormwater management program; implementation of construction site chemical controls; and implementation construction site chemical controls for local roads. The federal agencies have reportedly reviewed the proposed stormwater regulations and determined that upon adoption those regulations would satisfy these conditions. They have asked for a time line for rule adoption. The rules were published in the January 6, 2003 New Jersey Register (Vol.35 No.1). Three public hearings on the proposed rules were held in February 2003. At this time the NJDEP is preparing responses to the voluminous comments received and will adopt the rules by December 31, 2003, since a further delay would exceed the one-year window afforded between proposal and adoption.

Given the NJDEP's substantial progress over the past year toward satisfying the federal agencies' conditions and our strong commitment to fully satisfying those conditions going forward, the NJDEP will ask the federal agencies to suspend sanctions against the coastal zone management grant and 319 grant awards.

**Watershed Management Stakeholder Involvement**

In the Fall/Winter 2000 the NJDEP contracted with 16 lead entities using New Jersey's corporate business tax, to engage stakeholders in a comprehensive watershed management planning process in all 20 of New Jersey's watershed management areas (WMAs). This comprehensive stakeholder driven process represented members from each major stakeholder group in the state (agricultural, business and industry, academia, county and municipal officials, commerce and industry, purveyors and dischargers, and environmental groups). Through the implementation of this watershed management planning process over the past several years, Public Advisory Committees (PACs) and Technical Advisory Committees (TACs) were created in the 20 WMAs. Whereas PACs serve in an advisory capacity to the NJDEP, and examine and comment on a myriad of issues within their watershed, the TACs focus on the scientific, ecological, and engineering issues relevant to the mission of the PAC. In 2003, with the expiration of many of the contracts the NJDEP determined to move away from broad based planning and focus its resources on targeted planning initiatives.

NJDEP Commissioner, Bradley M. Campbell has attended several statewide meetings with watershed management stakeholders over the past year to both encourage their continued participation in the watershed management planning process and to set forth smart growth initiatives. Many of the original 20 WMA PACs continue to meet monthly to go over issues and work on Action Now type projects in their area. In April 2003, the Commissioner met with Watershed Associations and Watershed Public Advisory Committees to set forth the future direction for the watershed management planning process. The NJDEP will support staff resources in a process that is focused and targeted rather than broad based due to limited financial resources. WMA projects geared at eliminating impairments for specific subdrainages, assist in the development and implementation of TMDLs or stormwater management plans are a priority for the limited remaining statewide funds provided by the corporate business tax. Table 1

provides a summary of the various deliverables that the PACs and their various committees worked on and completed as part of the initial 2-year watershed management planning process.

**Table 1**
**Deliverable Status**

| | Deliverables | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **WMA** | GIS Layers | PAC List | Organizational Structure ground rules | Outreach Materials Events | Vision/ Issue List | Action Now | Open Space Plan | EWQ/ TMDL | Water Budget | Characterization Report |
| 1 | ✓ | ✓ | N/A | ✓ | ✓ | ✓ | ✓ | ✓ | N/A | ✓ |
| 2 | ✓ | ✓ | N/A-C | ✓ | ✓ | ✓ | ✓ | ✓ | N/A-WIP | N/A-C |
| 3 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | NS | ✓ |
| 4 | ✓ | ✓ | ✓ | ✓ | ✓ | WIP | WIP | ✓ | NS | WIP |
| 5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | N/A | NS |
| 6 | ✓ | ✓ | ✓ | ✓ | ✓ | PSW | ✓ | ✓ | NS | ✓ |
| 7 | ✓ | ✓ | N/A | ✓ | ✓ | ✓ | ✓ | ✓ | N/A | ✓ |
| 8, 9, 10 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 11 | ✓ | ✓ | ✓ | ✓ | N/A | ✓ | ✓ | N/A | N/A | ✓ |
| 12 | ✓ | ✓ | ✓ | | ✓ | ✓ | WIP | | WIP | ✓ |
| 13 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 14 | | ✓ | ✓ | ✓ | ✓ | ✓ | NS | ✓ | N/A | N/A-C |
| 15 | | | | | | | | | | ✓ |
| 16 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 17 | NS | NS | NS | NS | NS | NS | NS | WIP | NS | WIP |
| 18 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | SNC | N/A | ✓ |
| 19 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | N/A | ✓ |
| 20 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | NS | WIP |
| | | | | | | | | | | |

Note:
N/A= Not in Contract
N/A-C= Not in Contract but Completed
WIP= Work In Progress
SNC= Started but not completed-PAC stopped meeting
PSW= Part of the watershed=subwatershed
NS= Not started yet

| **Other=In selected contracts** |
|---|
| Pesticide monitoring Area 19 |
| Buffer Gap Assessment Area 19 |

**New Jersey Watershed Ambassadors' Volunteer Monitoring Program**

The New Jersey Watershed Ambassadors Program is a community-oriented AmeriCorps environmental program designed to raise awareness about watershed issues in New Jersey. Through this program, AmeriCorps members are placed in watershed management areas across the state to serve their local communities.

Watershed Ambassadors monitor the rivers of New Jersey through River Assessment Teams (RATs) and Biological Assessment Teams (BATs) volunteer monitoring programs. The members also work with community volunteers using these two volunteer monitoring techniques. Members are available to train local volunteers in these monitoring techniques.

Watershed Ambassadors are also available to make presentations to community organizations and schools. These interactive presentations provide information about water and watershed issues in New Jersey. Members educate students and citizens about watershed issues and empower them to get involved in their watershed.

The DWM began hosting this AmeriCorps program in September of 2000. AmeriCorps is a national service initiative that was started in 1993 and is the domestic Peace Corps. After two weeks of intensive training in volunteer monitoring techniques, watershed management issues and presentation skills, AmeriCorps members are placed with host agencies in their local watershed management area. The program works with all sectors of society to improve the quality of New Jersey's waterways and therefore improve the quality of life in New Jersey. The program works to improve water quality by exploring the relationships between people and the environment, nurturing community-based environmental activities and empowering residents to make responsible and informed decisions regarding their watershed

NJDEP's Volunteer Monitoring program was begun to help interested citizens gain the skills and experience needed to monitor their local waterways. The goal is to get New Jersey citizens out in the field enjoying, learning and collecting data about the characteristics of their watershed. The program was developed using existing monitoring programs such as Stony Brook Millstone Watershed Association as a guide. The program has been underway for three years and has progressed to the point that the NJDEP is designing a database that will become the clearinghouse for Volunteer Monitoring data from around the state. The program is separated into two components: RATS (River Assessment Teams) in which volunteers focus on observing the physical characteristics of the watershed and BATS (Biological Assessment Teams) in which the biological aspect of the watershed is assessed.

Each spring and fall, NJDEP offers workshops for both RATS and BATS at which volunteers learn about the types of data that will be collected and how to record the information therefore becoming certified Volunteer Monitors. Once a volunteer has completed the workshop, it is our hope that he/she will then get out into their watershed begin collecting Data and share this data with us at NJDEP. The data submitted by our volunteers is being compiled into a database that will help to identify trends in pollution problems, erosion problems and other "Hot Spots" in the watersheds throughout New Jersey. These trends will help the DWM identify problem areas and possible locations for future restoration projects. In fact, the river assessments conducted by the Americorp members was used as part of the fecal TMDL implementation plans.

**Nonpoint Source Education and Outreach Activities**

The list below of workshop and events were funded in a large part by an annual section 319(h) pass through grant to the Rutgers Office of Continuing and Professional Education. The DWM strives to achieve a balance between statewide program events while simultaneously addressing the needs of specific watersheds. All targeted WMA events were designed by the DWM in concert with the particular PAC. In addition to the events listed below, several River Assessment and Biological Assessment Workshops are conducted throughout the state each year. In addition, the DWM also supports Project WET through various water festivals and other watershed awareness activities at New Jersey schools to promote the importance and value of water. Outreach initiatives in 2003 have primarily focused on Workshops introducing the public to both sets of stormwater regulations discussed previously.

**2001 Workshops and Events**
Mechanics of Marketing Landscape Integrated Pest Management
Improving our Watershed through Action Now: the Northwest NPS Forum
Improving our Watershed through Action Now: the Raritan NPS Forum
Hands-On Riparian Buffer Workshop – Whippany River Watershed
Volunteer Monitoring of Lakes and Ponds
ROSGEN Stream Morphology and Classification Methodology
Greenways in the Arthur Kill Watershed Symposium

**2002 Workshops and Events**
Landscape Integrated Pest Management
Clean Water Act 101
Statewide Watershed Symposium
Volunteer Monitoring of Lakes and Ponds
Atlantic County Teachers' Roundtable
Stream Restoration

**2003 Workshops and Events**
Stormwater Permitting Workshops
Volunteer Monitoring of Lakes and Ponds

**Nonpoint Source Success Story**
On June 16, 2003, the NJDEP announced that an additional 3,889 additional acres of state waters would be opened for shellfish harvesting, making this the 15th consecutive year that continuing improvement in water quality has allowed expansion in areas where shellfish may be safely taken. The newly opened beds included 3,695 acres located in the Atlantic Ocean off of Monmouth County, the remainder off the upgraded waters include Manahawkin Bay, Tuckerton Cove and Strathmere. In 2001 an amazing 7,752 were upgraded, 5,425 of which were in Raritan Bay. The continued expansion of shellfish harvesting waters is a clear and reliable yardstick of progress in improving water quality. The openings were the result of combined efforts to upgrade wastewater treatments plant operations and reduction in nonpoint source pollution. The reclassification brought the total acreage available for shellfishing to over 600,000 or 90% of the state's coastal waters. New Jersey is the only state in the 24-state Interstate Shellfish Sanitation Conference that has consistently had more waters upgraded than downgraded over the years. New Jersey harvests the most shellfish of any state, more than 75 million pounds each year.

**2000 – 2000 319(h) Pass Through Grant Projects**
Enclosed below are lists of all of the 319(h) NPS implementation projects funded since 2000.

| FY | RECIPIENT | PROJECT DESCRIPTION | GRANT AMOUNT | WMA |
|---|---|---|---|---|
| 2000 | North Jersey RC & D | A Watershed Approach to Riparian Restoration | $180,000 | 1 |
| 2000 | Rider University | Centennial Lake: The University Model | $98,000 | 11 |
| 2000 | Gloucester County Parks & recreation | Backyard BMPs and Wildlife Habitats Project | $19,000 | 17 |
| 2000 | Salem County Dept of Planning | Salem County GreenKeepers Plan | $101,000 | 17 |
| 2000 | Ken Lockwood Chpt of Trout Unlimited | Restoring Our Rivers | $153,000 | 10 |
| 2000 | NY/NJ Baykeeper | Rahway River Watershed NP Pollution Implementation Project Milton Lake & Robinson's Branch, Rahway River Watershed | $112,000 | 7 |
| 2000 | South Branch Watershed Association | Action Plan Presentation to Communities to Address Nonpoint Source Pollution | $100,000 | 8 |
| 2000 | Borough of Middlesex | Restoration of Victor Crowell Park | $88,000 | 9 |
| 2000 | Ocean County SCD | Barnegat Bay Watershed-Specific Activity Guide | $60,000 | 13 |
| 2000 | Urban Cons Action Partnership | Best Management Practices Workshop for WMA 6 | $39,000 | 6 |
| 2000 | Stony Brook(restoration) | Streambank restoration on Millstone River & Stony Brook | $300,000 | 10 |
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| 2000 | Burlington County SCD | Smithville Farm Environmental Restoration Project | $150,000 | 19 |
| 2000 | Mt.Holly (restoration) | Riparian Forest Buffer, Streambank Stabilization & Education Program for the Mill Dam/Ironworks Park along the Rancocas Creek | $250,000 | 19 |
| 2000 | Science & Research | NJ Air Deposition network | $75,000 | |
| 2000 | USGS | Toms River NPS Data Analysis | $45,000 | 13 |
| 2000 | NJDA | Non-point source | $175,000 | State |
| 2000 | Rutger's | Municipal NPS Program Guide | $200,000 | State |
| 2000 | S&R F&W | Integrated Aquatic Assessment | $50,000 | State |
| 2000 | USGS | Ecological Assessment Methodology | $75,276 | State |
| 2000 | Swartswood Lakes & Watershed Association | Swartswood Lake Restoration & WMP and Stormwater Management Program | $100,000 | 1 |
| 2000 | Ten Towns Great Swamp: Site 28 Loantaka Brook -c/o Morris 2000 (watershed action NPS) | This project will design best management practices to correct sediment deposition and erosion at site 28 in the Loantaka Brook sub-watershed. These designs will be constructed as well as implemented. | $27,200 | 6 |
| 2000 | Whippany River Watershed Action Committee, Inc. | Whippany River Streambank Restoration -project design & construction for Bryant's stream, project design and phase I construction in Morristown 's Burnham Park, Atno Brook | $49,000 | 6 |
| 2000 | Rockaway River Watershed Cabinet c/o Morris 2000 | NPS-Stream Corridor Analysis & Improvement Grant - Knoll Golf Club | $23,800 | 6 |
| 2000 | Water Monitoring | | $25,000 | |
| 2000 | Science&Research (watershed action NPS) | Raptors | $80,000 | 17, 18, 19, 20 |
| 2000 | NJDA(watershed action NPS) | Fred Kelly | $20,000 | State |
| 2000 | Seaside Heights | Watershed Action oriented NPs | $75,000 | 13 |
| 2000 | Rutgers | NPS-education | $50,000 | State |
| 2000 | Lafayette 4-H Club | Abbett Avenue Clean Water Project, this project will provide the Lafayette 4-H members (62) hands on workshop and activities to restore and clean the river bank area along Patriot's Path | $1,800 | 6 |
| 2000 | Passaic River Coalition | Watershed Management Area #6 Riparian Forest Buffer Protection Program will create a municipal based program to educate and implement a stream corridor protection program to enhance riparian forest buffers in WMA #6. This program will be modeled after the Chesapeake Bay Project. | $50,000 | 6 |
| 2000 | Passaic River Coalition – Upper Passaic River Riparian Conservation Committee | Protection of Water Resources from NPS Pollution in the Upper Passaic River Watershed from Bernards to Chatham and Summit. | $40,000 | 6 |
| 2000 | Passaic River Coalition – Passaic Valley Ground Water Protection Committee | Protection of Ground Water from NPS Pollution in the Central Passaic River Basin of WMA #6. This project will be a continuation of well head protection work delineated within the WMA to start implementing NPS pollution prevention | $50,000 | 6 |
| 2000 | Rockaway River Watershed Cabinet c/o Ten Towns | Stream Corridor Improvement Program – An analysis of stream corridors along the Rockaway River and was identified in the Visions and Strategies report prepared by the Friends of Rockaway River. Stream bank restoration has already been started and this project will be a continuation. | $100,000 | 6 |
| 2000 | Great Swamp Watershed Association | Stormwater Management via Blue/Green Technologies Video will detail the blue/green approach to stormwater technologies. These technologies apply alternative, nonstructural approaches to stormwater management. | $40,700 | 6 |
| 2000 | Ten Towns Great Swamp Watershed Management Committee c/o Morris 2000 | Implementation of Riparian Forest Buffers and Public Awareness Program in the Great Swamp Watershed | $100,000 | 6 |
| 2000 | Friends of Rockaway River C/o Passaic River Coalition | Creating and Restoring Wetlands in Upper Berkshire Valley this project will create and restore wetlands on disturbed site that was once an active gravel quarry | $50,000 | 6 |
| 2000 | Whippany River Watershed Action Committee – Hanover Township | Whippany River Watershed Action Committee Model Ordinances | $50,000 | 6 |
| 2000 | Whippany River Watershed Action Committee – Mt. Lakes Township | Restoration of the Whippany River Watershed through implementation of BMPs by Municipal DPWs | $17.500 | 6 |
| 2000 | Union County | Echo Lake * combined with RP97-094 s an amendment. Tracking number should still refer to original RP97-094. | $100,000 *$106,000 | 7 |
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| FY | RECIPIENT | PROJECT DESCRIPTION | GRANT AMOUNT | WMA |
|---|---|---|---|---|
| 2001 | Mount Holly Township | Construct a biofilter wetland complex at the edge of Woolman Lake, Mount Holly to address stormwater runoff. | $145,215 | 19 |
| 2001 | Township of Riverside | Stormwater Inventory and Management Plan | $70,000 | 19 |
| 2001 | County of Camden | To construct a biofilter wetland on the north side of Cooper River Lake in Collingswood. | $159,450 | 18 |
| 2001 | Pompeston Creek Watershed Association | Retrofit 2 detention basins and stabilize eroding stream banks along Pompeston Creek. | $80,000 | 18 |
| 2001 | City of Woodbury | Stabilize & restore eroded portion of Woodbury Creek. | $59,900 | 18 |
| 2001 | Delaware Riverkeeper Network (American Littoral Society) | Riparian buffer completion along Cooper River Lake in Collingswood | $8,450 | 18 |
| 2001 | County of Gloucester | Repair sedimentation & erosional problems along Rowan University stream corridor (Chestnut Branch, Mantua Creek) | $120,315 | 18 |
| 2001 | Hamilton Township (Mercer) | Restore Robert L. Martin Lake and Pond Run areas by reducing pollutant load, and install an aquatic shelf to increase riparian zone for geese. | $70,000 | 11 |
| 2001 | Lawrence Township (Mercer) | Restore & stabilize 450 linear feet of bank along Colonial Lake thru wetland plantings. | $19,550 | 11 |
| 2001 | North Jersey Resource Conservation & Development Council | Implement a comprehensive watershed restoration strategy to improve water quality in the Upper Delaware. | $412,000 | 1 |
| 2001 | Township of Bloomfield | Addresses a biologically impaired site (Clark's Pond) on the Third River thru streambank restoration. | $100,000 | 4 |
| 2001 | Hackensack Riverkeeper Inc. | Addresses a biologically impaired site (Cole's Brook in Staib Park) on the VanSaun Brook—which is a tributary to the Hackensack River. | $100,000 | 5 |
| 2001 | Whippany River Watershed Action Committee Inc. | Continuation of a streambank restoration (Phase II Burnham Park,Atno Brook) previously funded to address fecal impairment. | $31,480 | 6 |
| 2001 | Marine Trades Association of New Jersey | Proposes to increase awareness & encourage implementation of innovative pollution control measures by NJ Marinas. | $65,601 | 13 |
| 2001 | Fairleigh Dickinson University | Proposes to plant eelgrass & widgeon grass as a technique for increasing water quality & reducing nonpoint source pollution in Barnegat Bay; to perform additional monitoring. | $156,249<br>Addtnl $155K from RP03-038<br>Total grant $311,249 | 13 |
| 2001 | Sylvan Lake Commission | Proposes to construct a concrete containment area to capture sediment & debris from the stormwater trunk line serving portions of Neptune City & Neptune Twp. | $40,000 | 12 |
| 2001 | Philadelphia Academy of Natural Sciences | Rapid bioassessment protocol for algae. | $53,354 | |
| 2001 | Hudson County, Office of Strategic Revitalization | Will demonstrate the applicability & utility of urban stormwater best management practices. | $40,000 | 7 |
| 2001 | Gloucester Soil Conservation District | Time of concentration calculations in Coastal Plain Watersheds | $40,000 | |
| 2001 | NJ Department of Agriculture | Provide support to NJDEP Watershed Mgt Program and Nonpoint Source Implementation Program | $175,000 | |
| 2001 | Rutgers University, Office of Continuing Professional Education | Develop & promote best mgt practices in stormwater mgt and nonpoint source pollution control in NJ through electronic outreach & training. | $18,445 | State |
| 2001 | Hopewell Township (Mercer) | Woolsey Brook watershed improvement project; construction of 2 parking areas on the Hopewell Twp Mun facility utilizing porous paving. | $141,780 | 11 |
| 2001 | Ramapo College | Riparian restoration for Ramapo Reservation Lake Mahwah | $64,500 | 3 |
| 2001 | Skylands CLEAN | Pequannock River; channelized stream renaturalization, Route 23-West Milford/Jefferson Townships. | $78,680 | 3 |
| 2001 | Hudson-Essex-Passaic SCD c/o Ramapo Council | WMA 3 Watershed Restoration Master Plan and Streambank Restoration will address all 3 AMNET mod impaired sites. | $268,750 | 3 |
| 2001 | Dover Township | Implementation plan designed to coordinate NPS strategies throughout the Long Swamp Creek watershed. | $190,000 | 13 |
| 2001 | Middletown Township Env Commission | Assessment of McClees Brook for a wetland restoration | $34,000 | 12 |
| 2001 | City of Linwood | To restore Mary Jane Pond and retrofit the stormwater drainage system that feeds into it. | $100,000 | 15 |
| 2001 | ANJAC | To perform a reforestation project in the headwaters of East Creek in Dennis Twp and perform monitoring. | $57,480 | 16 |
| 2001 | NY/NJ Baykeeper, City of Rahway | To restore flood plain habitat and improve water quality of the Rahway River watershed at Union & Allen Streets. | $147,500 | 7 |
| 2001 | Upper Raritan Watershed Association | Assess causes of the current quality of the Peapack Brook in Chester Borough, Chester Twp, Boro of Peapack-Gladstone, and Bedminster Twp, and develop management strategies to protect & restore those areas. | $83,980 | |

| FY | RECIPIENT | PROJECT DESCRIPTION | GRANT AMOUNT | WMA |
|---|---|---|---|---|
| 2002 | New Jersey Water Supply Authority | Mulhockaway Creek Watershed Study | $235,000 | 8 |
| 2002 | New York/New Jersey Baykeeper | Cedar Brook stream stabilization and buffer enhancement | $100,000 | 9 |
| 2002 | Union County | Warinaco Park Lake and Lagoon Restoration Project | $99,000 | 7 |
| 2002 | Rahway River Association | Robinson's Branch stream stabilization and rehabilitation | $110,000 | 7 |
| 2002 | Somerset County Park Commission | Riparian Buffer Restoration of Pond | $44,710<br>$2,515 | 10 |
| 2002 | New Jersey Water Supply Authority | Delaware and Raritan Canal Tributary Assessment and NPS Management | $61,215 | 9 |
| 2002 | Swartswood Lakes & Watershed Association | Swartswood Lake Restoration & WMP and Stormwater Management Program | $100,000 | 1 |
| 2002 | Liberty Township | Mountain Lake and Mountain Lake Brook NPS Control Project | $117,000 | 1 |
| 2002 | North Jersey RC&D | Walkill River Agricultural BMP Project/ NPS Intervention Project | $122,000 | 2 |
| 2002 | Sparta Township | Wallkill River - Glen Brook Restoration | $62,440 | 2 |
| 2002 | Vernon Township | Highland Lakes Regional NPS Project | $45,000 | 2 |
| 2002 | City of Trenton | Assunpink Creek Greenway Restoration Project | $100,000 | 11 |
| 2002 | Roosevelt Borough | Siltation Abatement and Restoration of Wetlands | $106,000 | 11 |
| 2002 | Trout Unlimited | Bear Swamp Brook Restoration | $3,750 | 3 |
| 2002 | Passaic County | Goffle Brook, Goffle Brook Park Restoration of Riparian Corridor, Phase 2 and 3 | $192,500 | 4 |
| 2002 | Clifton City Health Department | Race Track Pond at Memorial Park Restoration and Shoreline Stabilization | $68,000 | 4 |
| 2002 | Essex County Dept of Public Works | Verona Park Lake Bioengineering Shoreline Restoration Project | $40,000 | 4 |
| 2002 | Bergen County Dept of Parks | Van Saun Mill Brook Erosion Control | $100,000 | 5 |
| 2002 | Morris County Planning Department | Beaver Brook/Hibernia Brook Stormwater Management Plan | $74,840 | 6 |
| 2002 | Whippany River Watershed Action Committee | Whippany River Watershed Detension basin retrofit in Mendham Township | $27,000 | 6 |
| 2002 | Whippany River Watershed Action Committee | Speedwell Lake at the Whippany River - Phases 1-4 | $146,350 | 6 |
| 2002 | Gloucester City Sewer & Water Department | Municipal lake water quality management - Newton Creek Watershed | $50,000 | 18 |
| 2002 | Moorestown Board of Education | Retrofitting stormwater management facilities of the public schools in Moorestown | $64,000 | 18 |
| 2002 | Camden County Department of Parks | Biofilter Wetlands/Sediment Trap for Stormwater Treatment in the Watershed of Newton Lake | $129,500 | 18 |
| 2002 | Willingboro Township | Implementation of water quality BMPs in Willingboro Twp. In the Rancocas Creek Watershed | $91,064 | 19 |
| 2002 | Citizens United to Protect the Maurice River and its Tributaries | Parvin Branch and Tarklin Brook Assessment and Monitoring | $56,450 | 17 |
| 2002 | Cinnaminson Twp Public Schools | Retrofit of a stormwater outfall and stream bank restoration of the Pompeston Creek | $85,000 | 18 |
| 2002 | Plumsted Township | Crosswicks Creek - Oakford Lake and Paradise Park Streambank Restoration for Water Quality Improvement | $96,925 | 20 |
| 2002 | Hamilton Township | Shady Brook Pond wetlands buffer restoration for water quality improvement | $79,500 | 20 |
| 2002 | Friends of Monmouth County Parks System | Riparian Restoration in the Manasquan Watershed | $100,000 | 12 |
| 2002 | Fairleigh Dickinson University (w/RP01-089) | Mapping of SAV in Barnegat Bay | $155,000 | 13 |
| 2002 | Tuckerton Boro | Lake Pohatcong Restoration | $145,000 | 13 |
| 2002 | Lakewood Township | Lake Carasaljo Diagnostic/Feasibility Study | $100,000 | 13 |
| 2002 | Cape May County | Cox Hall Creek feasibility study and restoration plan | $100,000 | 16 |
| 2002 | Folsom Boro | Clean out of existing stormwater collection system in Folsom Boro | $52,440 | 15 |

| FY | RECIPIENT | PROJECT DESCRIPTION | GRANT AMOUNT | WMA |
|---|---|---|---|---|
| 2003 | Rutgers Office of Cont & Prof Educa | NPS Workshops | $50,000 | state |
| 2003 | Rutgers Office of Cont & Prof Educa | Stormwater BMP Manual Implementation | $178,000 | state |
| 2003 | NJDEP – Water Monitoring | Lower Delaware NPS Monitoring | $60,00 | 17, 18, 19, 20 |
| 2003 | NJ Dept of Agriculture | NPS Implementation | $175,000 | state |
| 2003 | NJ Water Supply Authority | Stormwater Management Plan for Cedar Grove Brook Watershed | $ 150,000 | 9 |
| 2003 | Township of Neptune | Implementing Stormwater BMPs-Lake Alberta | $195,400 | 12 |
| 2003 | Monmouth County | Ramenessin Brook NPS Assessment & Impact | $177,500 | 12 |
| 2003 | Camden/Gloucester Soil Conservation Dis | Regional Stormwater Management Plan for Racoon Creek | $637,174 | 18 |
| 2003 | Rutgers University | Regional Stormwater Management Plan for Robinson's Branch | $291,124 | 7 |
| 2003 | Daretown Lake Association | NPS Pollution Analysis Upper Salem River & Daretown Lake | $63,200 | 17 |
| 2003 | Boro of Avon by the Sea | Sylvan Lake Restoration – Final Stage | $230,000 | 12 |
| 2003 | Swartswood Lake Watershed Association | Swartswood Lake Watershed Diagnostic Assessment | $65,000 | 1 |
| 2003 | Walkill National Wildlife Refuge | Walkill River Fecal Reduction and Restoration | $167,400 | 2 |
| 2003 | Pequannock River Coalition | Pequannock River Thermal Mitigation | $23,105 | 3 |
| 2003 | Borough of Demarest | Demarest Park Shoreline Restoration | $179,500 | 5 |
| 2003 | Rutgers University w/Morris County | Regional Storwwater Mgt Plan for troy Brook | $213,400 | 6 |
| 2003 | City of Trenton | Urban Retrofit in the City of Trenton | $50,000 | 10 |
| 2003 | Rutgers University | Bee Meadow Pond Shoreline Restoration | $126,940 | 6 |
| 2003 | Monmouth University | Fecal Source Trackdown for Impaired Waterbodies | $124,762 | 12 |
| 2003 | Rutgers NJ EcoComplex | Fecal NPs Trackdown | $601,975 | state |

**Next Steps**

While the above mentioned actions and initiatives are a significant step in the right direction, more work remains to be completed. The Water Quality Management Planning Rules (N.J.A.C. 7:15) are anticipated to be a centerpiece of the NJDEP's implementation of Smart Growth Initiative. Therefore the DWM will responsible for completely overhauling these rules to: provide clearer direction on the expenditure of funds, recapture the regulation of septic systems, establish ecological based flow gloss, restrict consumptive and depletive water uses, protect critical habitats and riparian corridors, implement source water protection and TMDL implementation plans, and to encourage water and wastewater infrastructure improvements consistent with the principles of "smart growth." The DWM predicts that through its continued partnership with EPA and watershed stakeholders along with a strong regulatory basis that New Jersey residents will have clean water now and for future generations.

**For Additional Information**

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